

Drafted
10/21/2013
B21
10/21/2013

We Claim:

1. A method of forming a weakening area in an airbag cover having a support layer and a decorative layer over the support layer, comprising the steps of:
 - providing a cutting support that supports the airbag;
 - providing a cutter;
 - placing the airbag cover with the decorative layer facing down on the support; and
 - cutting a tear line of a predetermined pattern through the support layer and into the decorative layer with the cutter while controlling the depth of cut relative to the support to precisely control the residual thickness of the tear line and to prevent the cutter from penetrating through the decorative layer.
2. A method according to claim 1, further including the step of applying a predetermined force at least to the area of the cover being cut during the cutting step.
3. A method according to claim 2, wherein the cutter exerts the predetermined force on the cover during the cutting step.
4. A method according to claim 1, further including the step of maintaining at least to the area of the cover being cut against the support during the cutting step with vacuum.
5. A method according to claim 1, wherein the cutter is an oscillating cutter.
6. ~~A~~ method according to claim 1, wherein the cutter is a blade.
7. A method according to claim 1, wherein the support layer comprises a plastic.

8. A method according to claim 1, wherein the decorative layer comprises leather.

9. A method according to claim 1, wherein the support layer comprises a thermoplastic elastomer and the decorative layer comprises leather.

10. A method according to claim 1, wherein the cover further includes an intermediate layer disposed between the support layer and the decorative layer.

11. A method according to claim 10, wherein the intermediate layer comprises a soft material selected from foamed plastic or an elastomer.

12. A method according to claim 1, wherein the depth of cut varies along the tear line.

13. A method according to claim 11, wherein the cutting step includes cutting deeper at a central region of the tear line than at ends thereof.

14. A method according to claim 11, wherein the cutting step includes decreasing the depth of cut continuously from the center of the tear line to ends thereof.

15. A method according to claim 1, wherein the tear line is substantially H-shaped.

16. A method according to claim 15, wherein the ends of the tear line are cut in a semicircular shape.

17. A method according to claim 1, wherein the tear line is cut with an undulating shape.

18. A device for forming a weakening area in an airbag cover having a support layer and a decorative layer over the support layer, comprising:

a cutting support for supporting the airbag cover with the decorative layer side facing down;

a cutter displaceably positionable over the cutting support;

a controller for displacing the cutter over the support for cutting a tear line of a predetermined pattern through the support layer and into the decorative layer with the cutter while controlling the depth of cut relative to the support to precisely control the residual thickness of the tear line and to prevent the cutter from penetrating through the decorative layer.

19. A device according to claim 18, wherein the cutter is a blade.

20. A device according to claim 19, wherein the support has a plurality of apertures, and further includes a vacuum generator in communication with the apertures for generating vacuum and maintaining the cover against the support.

21. An airbag cover formed by the method of claim 1.

22. An airbag cover formed by the device of claim 18.